

Two new species of the genera *Drassyllus* and *Hitobia* (Araneae: Gnaphosidae) from Amami-ôshima Island, southwest Japan

Takahide Kamura

Biological Laboratory, Otemon Gakuin University, 2-1-15, Nishi-Ai, Ibaraki,
Osaka, 567-8502 Japan
E-mail: kamura@res.otemon.ac.jp

Abstract — Two new gnaphosid species of the genera *Drassyllus* and *Hitobia* are described from Amami-ôshima Island, southwest Japan under the names of *Drassyllus amamiensis* and *Hitobia makotoi*. *D. amamiensis* is distinguished from *D. biglobus* Paik 1986 by the anterior epigynal margin slightly swollen inward in antero-lateral parts. *H. makotoi* is separated from *H. unifascigera* (Bösenberg & Strand 1906) by the epigynum without posterior protrusion.

Key words — Gnaphosidae, *Drassyllus*, *Hitobia*, new species, Amami-ôshima Is.

Introduction

In the present paper, I will describe two new gnaphosid species of the genera *Drassyllus* and *Hitobia* from Amami-ôshima Island, southwest Japan.

The genus *Drassyllus* is widely spread in Holarctic and Oriental regions, and 90 species were recorded up to the present (Platnick 2011). From East Asia (mainly China, Korea and Japan) 12 species of this genus are known (Platnick & Song 1986; Paik 1986, 1992; Kamura 1987; Hu & Wu 1989), and of these four species are distributed in Japan (Kamura 1987, 1990, 2009): *D. sanmenensis* Platnick & Song 1986, *D. sasakawai* Kamura 1987, *D. shaanxiensis* Platnick & Song 1986 and *D. yaginumai* Kamura 1987.

On the other hand, the range of the genus *Hitobia* is restricted in East Asia. Eleven species of this genus were recorded from Japan, Korea, China, Taiwan, Vietnam, and Thailand (Kamura 1992; Yin et al. 1996; Deeleman-Reinhold 2001; Song et al. 2004; Zhang et al. 2009), and of these three species occur in Japan (Kamura 1992, 2009): *H. asiatica* (Bösenberg & Strand 1906), *H. unifascigera* (Bösenberg & Strand 1906) and *H. yasunosukei* Kamura 1992.

Recently Emeritus Prof. Makoto Yoshida, Ritsumeikan University, kindly gave me three gnaphosid specimens collected by him from Amami-ôshima Island. After examining the specimens, I recognized they belong to undescribed species of the genera *Drassyllus* and *Hitobia*.

The type specimens of the new species described in this paper are deposited in the collection of the Department of Zoology (Tsukuba) of the National Museum of Nature and Science, Tokyo (NSMT).

The abbreviations used in this paper are as follows: ALE, anterior lateral eye; AME, anterior median eye; MOA, median ocular area; p, proventral; PLE, posterior lateral eye;

PME, posterior median eye; r, retroventral. Morphological terms on the genus *Drassyllus* follow those used in Platnick & Shadab (1982). Eye size means length of long axis of an eye, but measurement of posterior median eye was made at horizontal level. All measurements are given in mm.

Drassyllus amamiensis n. sp.

[Japanese name: Amami-yorimekemurigumo]
(Figs. 1–2)

Type specimen. Holotype: ♀, Naze-daikuma, Amami-shi, Amami-ôshima Is., Kagoshima Pref., Japan, 29.III. 2010, M. Yoshida leg. (NSMT-Ar 9786).

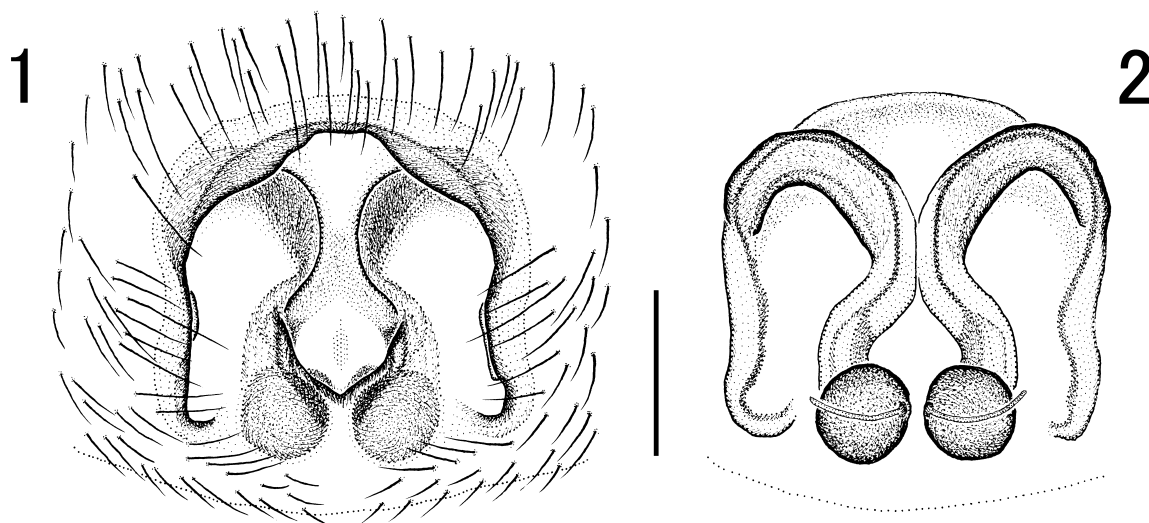
Diagnosis. This new species is somewhat similar to *D. biglobus* Paik 1986 recorded from Korea in the structure of epigynum, but is distinguished from the latter by the anterior epigynal margin slightly swollen inward in antero-lateral parts (Fig. 1) instead of being smoothly rounded in the latter (Paik 1986, fig. 9).

Description. ♀. Measurements based on the holotype. Body length 6.30. Carapace length 2.60, width 1.98. Abdomen length 3.70, width 2.35. Eye sizes: AME 0.13, ALE 0.15, PME 0.13, PLE 0.11. Distances between eyes: AME-AME 0.05, AME-ALE 0.01, PME-PME 0.03, PME-PL 0.04, ALE-PL 0.08. MOA anterior width 0.31, posterior width 0.29, length 0.39. Clypeus height 0.11. Length of legs as in Table 1.

Ventral spines on legs I and II. ♀: Tibiae: I and II 0–0–0, metatarsi: I & II 2–2–0.

Anterior eye row slightly recurved, posterior eye row slightly procurved. Thoracic groove distinct. Chelicera with five teeth on promargin of fang furrow, and two teeth on retromargin.

Epigynum (Fig. 1): anterior epigynal margin extending



Figs. 1–2. *Drassyllus amamiensis* n. sp., female holotype. 1. Epigynum, ventral view. 2. Internal genitalia, dorsal view. Scale = 0.2 mm.

Table 1. Measurements of legs of *Drassyllus amamiensis* n. sp. (female holotype).

Leg	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
I	2.05	1.26	1.58	1.38	1.08	7.35
II	1.80	1.06	1.28	1.20	0.94	6.28
III	1.58	0.82	1.05	1.25	0.80	5.50
IV	2.28	1.20	1.79	2.05	1.02	8.34

Table 2. Measurements of legs of *Hitobia makotoi* n. sp. (female holotype).

Leg	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
I	1.12	0.62	0.75	0.62	0.44	3.55
II	1.10	0.62	0.75	0.64	0.44	3.55
III	0.96	0.50	0.63	0.75	0.50	3.34
IV	1.27	0.64	0.94	1.10	0.50	4.45

posteriorly beyond the base of midpiece, with antero-lateral parts slightly swollen inward. Female internal genitalia (Fig. 2): posterior epigynal ducts not strongly winding.

Color. Body and appendages dark reddish brown, venter of body somewhat lighter.

Male. Unknown.

Distribution. Japan (Amami-ôshima Is.). Known only from the type locality.

Etymology. The specific name is derived from the island where the specimen was collected.

***Hitobia makotoi* n. sp.**

[Japanese name: Amami-tonbigumo]

(Figs. 3–7)

Type series. Holotype: ♀, Kawauchi, Sumiyô-cho, Amami-shi, Amami-ôshima Is., Kagoshima Pref., Japan, 20.IX.2008, M. Yoshida leg. (NSMT-Ar 9787). Paratype: ♀, same data as the holotype (NSMT-Ar 9788).

Diagnosis. This new species is very similar to *H. unifascigera* (Bösenberg & Strand 1906) in general appearance especially in having a transverse white band on abdomen [Fig. 3; cf. Kamura 1992 (fig. 10), 2009 (fig. 2–2–58–159)], but is separated from the latter by the structure of epigynum without posterior protrusion [Fig. 6; cf. Kamura 1992 (fig. 15), 2009 (fig. 2–2–58–160)].

Description. ♀. Measurements based on the holotype. Body length 4.83. Carapace length 2.13, width 1.35. Abdomen length 2.70, width 1.38. Eye sizes: AME 0.09,

ALE 0.09, PME 0.07, PLE 0.08. Distances between eyes: AME-AME 0.02, AME-ALE 0.01, PME-PME 0.09, PME-PLP 0.09, ALE-PLP 0.13. MOA anterior width 0.20, posterior width 0.23, length 0.25. Clypeus height 0.05. Length of legs as in Table 2.

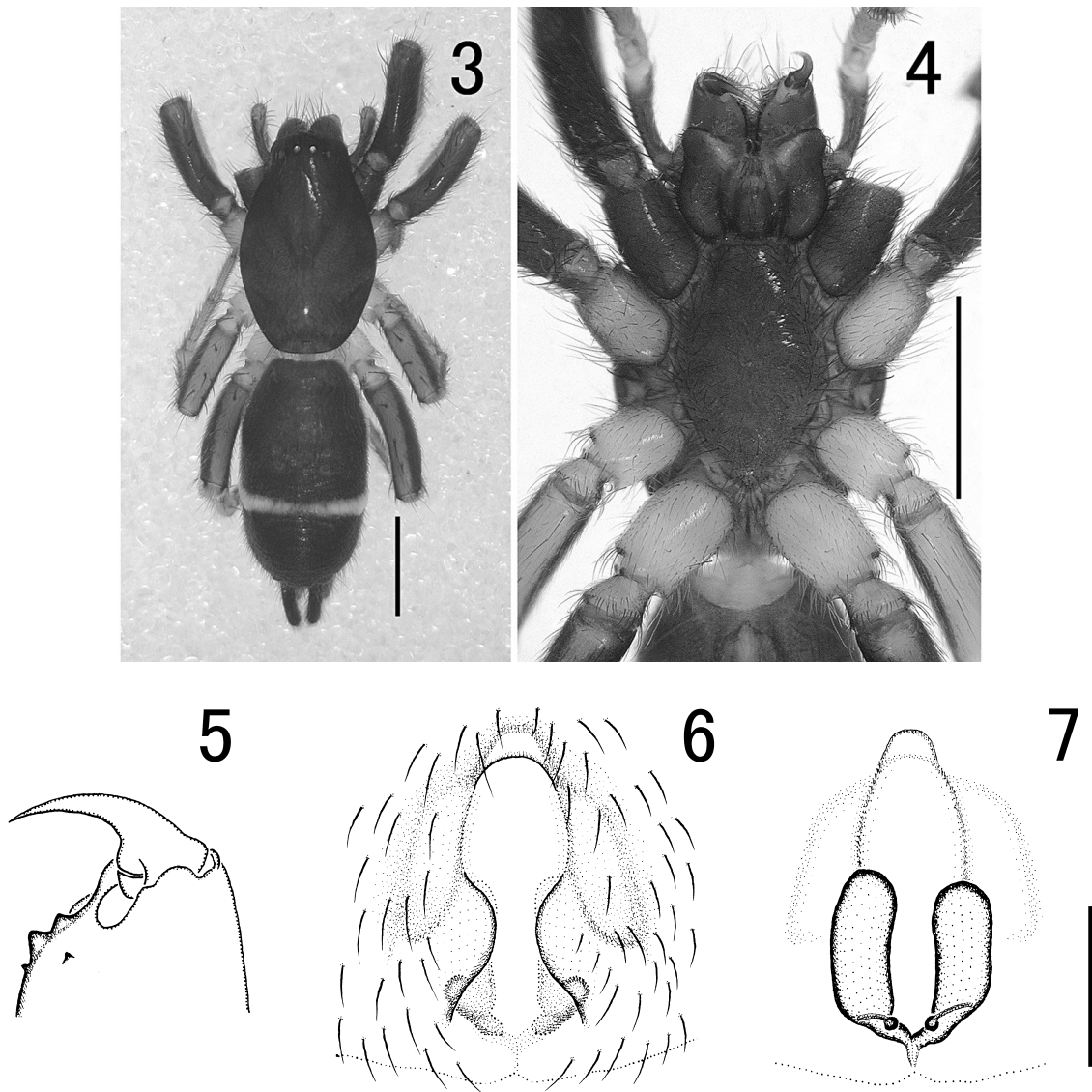
Variation. Female paratype. Body length 4.68. Carapace length 2.25, width 1.40. Abdomen length 2.43, width 1.28.

Ventral spines on legs I and II. ♀: Tibiae: I 1p–1p–2, 1p–2–2 or 1r–2–2, II 0–1p–2 or 0–2–2; metatarsi: I & II 2–0–0.

Both eye rows recurved. Thoracic groove indistinct. Chelicera with three teeth on promargin of fang furrow, and one tooth on retromargin (Fig. 5). Trochanters I and II without ventral notch, trochanters III and IV each with a shallow ventral notch.

Epigynum (Fig. 6) with a distinct anterior hood, and shallow longitudinal concavity in median part. Female internal genitalia (Fig. 7) rather simple with spermathecae elongated.

Color. Carapace and mouth parts blackish brown. Palps with trochanters and femora blackish brown, other segments light yellowish brown. Legs with coxae I, trochanters I and II, and femora I and II blackish brown (trochanters with ventral part light-colored); other segments of legs I and II, and all the segments of legs III and IV dusky yellow to light yellowish brown; femora, patellae, tibiae and metatarsi of legs III and IV with black-colored longitudinal markings on both lateral sides. Abdomen blackish brown with a transverse white band on dorsum, spinnerets blackish brown.



Figs. 3–7. *Hitobia makotoi* n. sp., female paratype (3–4) and female holotype (5–7). 3. Habitus. 4. Cephalothorax, ventral view. 5. Left chelicera, posterior view. 6. Epigynum, ventral view. 7. Internal genitalia, dorsal view. Scales = 1 mm (3–4), 0.2 mm (5–7).

Male. Unknown.

Distribution. Japan (Amami-ôshima Is.). Known only from the type locality.

Etymology. The specific name is dedicated to the collector of the type specimens.

Acknowledgments

I would like to express my sincere thanks to Emeritus Prof. Makoto Yoshida, Ritsumeikan University, Kusatsu, Shiga, for offering the specimens used in this study.

References

- Bösenberg, W. & Strand, E. 1906. Japanische Spinnen. Ahb. Senckenb. Naturf. Ges., 30: 93–422, pls. 3–16.
- Deeleman-Reinhold, C. L. 2001. Forest Spiders of South East Asia. Koninklijke Brill NV, Leiden, 591 pp, 8 pls.
- Hu, J. L. & Wu, W. G. 1989. Spiders from Agricultural Regions of Xinjiang Uygur Autonomous Region, China. Shandong Univ. Publ. House, Jinan, 435 pp.
- Kamura, T. 1987. Three species of the genus *Drassyllus* (Araneae: Gnaphosidae) from Japan. Acta Arachnol., 35: 77–88.
- Kamura, T. 1990. Notes on Japanese gnaphosid spiders (IV). One newly recorded species and two little known species of Japan. Atypus, 95: 32–38. (In Japanese)
- Kamura, T. 1992. Two new genera of the family Gnaphosidae (Araneae) from Japan. Acta Arachnol., 41: 119–132.
- Kamura, T. 2009. Gnaphosidae. pp. 483–499. In: Ono, H. (ed.) The Spiders of Japan with keys to the families and genera and illustrations of the species. Tokai Univ. Press, Kanagawa, xvi + 738 pp. (In Japanese)
- Paik, K. Y. 1986. Korean spiders of the genus *Drassyllus* (Araneae; Gnaphosidae). Korean Arachnol. 2(1): 3–13.
- Paik, K. Y. 1992. Korean spiders of the genus *Drassyllus* (Araneae: Gnaphosidae) II. Korean Arachnol. 8: 67–78.
- Platnick, N. I. 2011. The World Spider Catalog, Version 12.0. American Museum of Natural History, online at <http://research.amnh.org/iz/spiders/catalog/index.html>

- Platnick, N. I. & Shadab, M. U. 1982. A revision of the American spiders of the genus *Drassyllus* (Araneae, Gnaphosidae). Bull. Amer. Mus. Nat. Hist., 173: 1–97.
- Platnick, N. I. & Song, D. X. 1986. A review of the zelotine spiders (Araneae, Gnaphosidae) of China. Amer. Mus. Novitates, 2848: 1–22.
- Song, D. X., Zhu, M. S. & Zhang, F. 2004. Fauna Sinica: Invertebrata Vol. 39: Arachnida: Araneae: Gnaphosidae. Science Press, Beijing, ix+362 pp. (In Chinese with English summary)
- Yin, C. M., Peng, X. J., Gong, L. S. & Kim, J. P. 1996. Description of three new species of the genus *Hitobia* (Araneae: Gnaphosidae) from China. Korean Arachnol. 12(2): 47–54.
- Zhang, F., Zhu, M. S. & Tso, I. M. 2009. Three new species and two new records of Gnaphosidae (Arachnida: Araneae) from Taiwan. J. Hebei Univ. (Nat. Sci. Ed.), 29: 528–532, 542. (In Chinese with English abstract)

Received October 11, 2011 / Accepted November 1, 2011